GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

BY R.P.A.D.

NOTICE OF DIRECTION UNDER SECTION-5 OF ENVIRONMENT (PROTECTION) ACT- 1986 FOR THE VIOLATIONS OF THE HAZARDOUS & OTHER WASTE (MANAGEMENT & TRANSBOUNDARY MOVEMENT) RULES -2016 AS AMENDED FROM TIME TO TIME.

WHEREAS you **M/S. HINDALCO INDUSTRIES LTD** are having an industrial plant at **Plot No: 2,10,11,43 GIDC Estate Dahej, At Po: Dahej-Lakhigam, Tal: Vagra, Dist: Bharuch.**

AND WHEREAS the Gujarat Pollution Control Board has issued Consolidated Consent & Authorization AWH- 108216 valid up to 02/03/2026 subject to conditions mentioned therein for manufacturing Copper Cathode, Sulphuric Acid (98%), Phosphoric Acid (as P_2O_5) etc.

AND WHEREAS during the inspection of your industrial plant on **08/11/2021** by the Authorized officer of the Board and it has been noticed that:

1) Copper slag is observed being dumped in about 10-meter width area of Reserved Forest, along the boundary wall of factory premises (outside the factory premises) behind the 16-hectare land area.
2) Unit has not lifted previously dumped copper slag from Reserved Forest area.
3) Ponding of storm water/contaminated storm water is observed in Reserved Forest area behind the 16- hectare land area of the unit. Analysis Report (AR) of sample collected from contaminated water/water ponding in the reserved forest area shows pH: 6.33, COD:59 mg/l, NH3-N:6.16 mg/l, Copper :3.71 mg/l.
4) Analysis Report (AR) of Ambient Sampling Point: AAQM carried out at 16 acre area (behind the Smelter-3, common stack) shows RSPM: 442 mg/m3 which is high.
5) Analysis report (AR) of Samples collected from stacks shows unit is not complying emission norms prescribed in CCA as below:

Sample Location	Parameters Observed	Norms
Stack attached to secondary gas scrubber of Smelter-1, Plant	SO_2: 124.08 mg/nm3	SO_2: 40 mg/nm3
Stack attached to centralized scrubbing system of smelter-III	SO2: 43.54 mg/nm3	SO2: 40 mg/nm3
Stack attached to Sulphuric acid plant -1	ACID MIST: 30 mg/nm3	ACID MIST: 25 mg/nm3

6) Unit has not provided adequate Green belt and plantation area.

AND WHEREAS it seems that you are not complying with the provisions of The Hazardous & Other Waste (Management & Transboundary Movement) Rules - 2016 by disposing hazardous waste in unauthorized manner. Further, handling of hazardous waste by unauthorized way may create serious environmental damages.

Now, therefore, I S. J. Pandit, IFS (Retd.), Member Secretary of Gujarat Pollution Control Board in exercise of the power conferred on file no. Legal-G-28 under section (5) of the Environment (Protection) Act -1986 propose to issue directions as under:

1. To close down your industrial activity under the section (5) of The Environment (Protection) Act – 1986.
2. To close down your industrial activity under said act if industrial activity runs by Captive Power Plant or D.G.Set.
3. To direct the concerned authority to disconnect electrical supply and Water supply of your unit.

You are hereby directed to submit Bank Guarantee of Rs. 20 Lacs (of any scheduled bank of Gujarat) and BG shall be valid upto the time limit mentioned in the action plan submitted by you on dated 26.08.2021 & 11.11.2021 and payable at Gandhinagar.

You are hereby directed to reply within 15 days from the date of serving of this notice failing which, it shall be presumed that you have nothing to say in this matter and appropriate action will be initiated against you for the conduct of the business of your industry, under the Environment (protection) Act 1986 for non-compliance of Hazardous and Other Waste (Management and Trans boundary Movement) Rules – 2016 & amendments thereof.

For and on behalf of
Gujarat Pollution Control Board

S.J.PANDIT, IFS (RETD)
MEMBER SECRETARY

NO: GPCB/BRCH-B/CCA-310(20)/ID:15178/ **Date: /11/2021**

Issued to:
M/S. HINDALCO INDUSTRIES LTD
Plot No: 210,11,43,
GIDC Estate Dahej,
At Po: Dahej-Lakhigam,
Tal: Vagra, Dist: Bharuch.

GPCB

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Copy To:

1) **The PCCF & HoFF,**
Aranya Bhavan,
Near CH-3 Circle,
Sector-10A, Gandhinagar..... To take necessary action as per rules & regulations of your department. .

2) **The Regional Officer,**
Gujarat Pollution Control Board,
Regional Office,
Bharuch.....for monitoring & verification.

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

1 **Industry Details** **Hindalco Industries Ltd**

Outward No: 28856-18/08/2021

Email :
sanjay.k@adityabirla.com

Telephone :
02641662522

PLOT NO:2,10,11,43 GIDC,
AT POST. DAHEJ-LAKHIGAM, TAL:VAGRA,
DAHEJ - 392130
DIST : Bharuch , TAL : Vagra , SIDC : Dahej

Inspection Id : 615284 (H.O.Reference) **Ro Name : Bharuch**

2 **Type / Scale / Sector / Status :** RED / LARGE / Copper Smelter / In Operation

3 **Inspection Dt & Time :** 05/08/2021 13:20 / Air , Water , Hazd **Person Contacted :** Dr. Sanjay Kumar - AVP

4 **Env Audit Detail : Sch : 1 , Birla Vishvakarma Mahavidyalaya Engineering College, , Year : 2017 , On Dt :**

Commissioned Dt : 31/03/1997 **Production Start Dt :** 01/04/1997 **Applicability of CRZ Rules :** No

5 **Water Consumption in Kilo Lts Per Day** Ind : 38374.000 Dom : 2336.000 **Borewells:** 0

6 **Waste Water generation / Discharge (klpd) :** Ind : 4729.000 Dom : 1300.000 **Tubewells:** 0

7 **Consumer No.(Electric Meter):** **Source of Water Supply:** GIDC

8 **Disposal Mode of Industrial / Domestic :** Sea / On Land

9 **Discharge Pt / Final Receiving Body (Ultimate):** To Effluent Treatment Plant / Deep sea though multiple diffuser system

10 **Status of water consent Under the Water Act,1974:** AWH-108216-02/03/2025 Last Inward:195096-13/05/2021[PRO]

11 **Effluent Treatement plant (ETP) : Units, if provided and status :**
ETP Details : P-Chemical Dousing Tank,P-Clarifier,P-Collection Cum Equalization,P-Collection Tank,P-Lamella Settler,P-Nuetralization,P-Pri Settling Tank,S-Anaerobic Digestor,S-Filter Pressure,Secondary,Tertiary

12 **Whether Industry is a member of CETP ?** No

13 **Boilers=2 , DG Sets=2 , Flue Gas =6, Process =22 , ETP Cap = 7380 , Capacity of All = 500000 MT Copper Cathode**

APCM Details : Bag Filter,Cyclone ,Dust Collector,E.S.P,Heater/Furnace-Low Sulphur Fuel,Not Applicable,Scrubber,Water Sprinkler

Fuel Used : Coal,H.S.D,L.N. Gas,Neptha

Stack Attached to : *** Not Applicable,.... Any Other,Boiler,D.G. Sets

14 **TSDF Name :** Using OWN TSDF Facility

15 **Lab Charges Pending : NIL** **Water Cess Charges Pending : NIL**

16 **Last Env. Form V : 2015-2016** **Water Cess Return : 2017-2018** **HW Monthly Return : 2021-07**

17 **Last 3 Legal Action :**

Insp Dt	Act	Leg Dt	For	Insp ID	IR-Leg	Type	Out No
18/02/2021	SCN	20/03/2021		596555	SCN	HOR	586273
24/06/2020	SCN	05/10/2020		569038	SCN	ROU	569163
27/11/2019	NOT	03/02/2020	31A,,	548742	NOT	DIR	553529

Monthly Patrak Data : Last Return : 202107 **HAZD Waste Disposal : 89.170 (0 Trucks)**

Electricity Units Consumed in month	Water Consumed in month	Effluent Discharged in month
Production - 56348112, ETP - 318139, APCM - 41745217	Meter Reading - 3158620, Kilo Litre - 594031	Meter Reading - 5973, Kilo Litre - 6274

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One Time Updations				
k	-	**Recycler Registration Valid ??**	N.A	
General Observation				
a	-	Is the Industry in Operation ??	Yes	
a	-	R.O File No	ID 15178	
b	-	**Industry Operating without CCA**	No.	
c	-	**Has Production exceeded (last 3 MTHs) than CCA-Qty**	No.	
d	-	**Any products-NOT in CCA, manufactured-Last 3 MTHs**	No.	
e	-	**Foul Odour/Fugitive Emission/Bye Pass in Premises ??**	No.	
f	-	Industry Name CHANGED in recent times ??	No.	
g	-	**Has Regn with CETP or TSDF expired ??**	N.A	
h	-	Seperate Energy Meter for A.P.C.M ?	N.A	
h	-	Provision of any STAND-BY Pump ??	N.A	
Air Related				
a	-	**Fuel Type confirmitive with CCA ?**	Yes	
b	-	**Av. Fuel Consumption EXCEEDING CCA limits**	No.	
c	-	**APC Measures confirmitive with CCA conditions ??**	Yes	
d	-	ALL APCMs are in operation	Yes	
e	-	SMF availability	Not Reqd	
f	-	**Thick Smoke observed in Flue Gas/Processes ??**	No.	
g	-	**ph of Scrubbing Media as per requirement ??**	Yes	
h	-	Ultimate Disposal of Scrubbing Media	ETP	
i	-	Nos of Samples : Stack & Ambient	0, 0	
GEM				
18	-	Where Authorization Under BMW Rules 2016 obtained ? Provide Authorization No. / Date	Yes	NA
Haz Waste Related				
a	-	**Haz waste Catg confirmitive with CCA**	Yes	
b	-	**H.W generation exceeding CCA limits**	No.	
c	-	**Collection, Storage, Treatmnt, Disposal Facility Adequate ??**	Yes	
d	-	Reusing or Recycling of Haz Waste by Industry ?	No	
e	-	LogBook / XGN Manifests / Disposal Records TALLYING ??	Fully	
f	-	Stock of Haz-Waste @ premises/Whether EXCESS ?	---	
g	-	**Recycler/ Actual user has valid Authorization under rules 6 or 9 of HOWR-2016?**	Yes	NA
h	-	**Installed capacity of the plane based on machinery installed (Capacity of Machine,No. of Batch/Day,Annual Capacity)**	--	
i	-	**Technical capability and equipment complying with the SOP/Guideline?**	Yes	
j	-	**Is unit complying the conditions gives in SOP/Guidelines?**	Yes	
k	-	**Facility is adequate for the applied process**	Yes	
l	-	**Passbook is maintained?**	Yes	
m	-	**Details of PLI, if applicable**	--	
n	-	**Details of safety spects provieded by the facility**	--	
o	-	**Seprate storage area for Haz. Waste for the utilization or generation from the process is provided?**	Yes	
p	-	**Quantity of Hazardous waste procured as per CCA?**	Yes	
Water Parameter				
b	-	Source of Water Supply	GIDC	
c	-	**W.W.G is EXCEEDING the CCA Limits**	No.	

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d	-	**W.W Disposal as per the Consent Conditions ?**	Yes	
e	-	Was the ETP in operation ?	Yes	
f	-	Treatment System ADEQUATE to handle existing effluent	Adequate	
g	-	**Did u observe ANY ILLEGAL Discharge ??**	No.	
h	-	Nos of Samples collected	1	

Remarks :

-

Note: EIA 2006 / SEIAA / E.C / MOEF Applicable : Yes

Site Observations during Inspection , PCB-ID: (15178)

This unit is inspected with ref to HO email dated 29/07/2021 regarding compliance status of Industry with reference to written instruction issued on 18/03/2021. During inspection, unit is found working and most of plants are observed in operation. Phosphoric acid plant and Di ammonium phosphate plant are closed since April 2020. It is informed that these plants are kept closed due operational problem and decision is so far not taken about restarting of these plants after modification/ upgradation or dismantle of these plants. Captive power plant 1 & 3 are observed in operation. As per record of the unit, production is observed within CCA and average water consumption in last three months is 14613 KL/d. For treatment of wastewater, unit has ETP-1 consisting Raw effluent storage tanks, Primary Reaction tanks with Lime dosing system, 1st stage Primary Clarifier, 2nd stage precipitation Reaction tanks with lime dosing system, 2nd stage Primary Clarifier, First stage treated wastewater holding Lagoon, RVDF (for sludge dewatering). Partially treated waste water from above ETP-1 is further taken into ETP-2 consisting Equalization tank, High sped rate contact clarifier (HRCC), Ultrafiltration and RO System. RO permeate is reused in plant while RO reject is discharged into deep sea through own discharge pipeline of the unit. During inspection, all treatment sections are found in operation. One sample of RO reject from final outlet is collected which is discharged into sea through own pipeline. As per last three months record of the unit, average RO permeate reuse is 2216.13 KL/d and average wastewater (RO reject) discharge is 338.06 KL/d. The compliance status reference to written instruction issued on 18/03/2021 is attached herewith. [505]-10/08/2021

I recommend : a. Keep on Records + Notings

W.C Notings: As per IR[4756-AEE]~

Specific Instructions given to Industry at the time of visit , for Pt to Pt Compliance

It is observed that point No.2,7,8,10,14 of written instructions issued on 18/03/2021 are partially complied and point no. 11 & 12 are still pending/Not complied. In this regards you are instructed to take all necessary actions in compliance with above mentioned pending works at the earliest.

Compliance Observed in this Inspections.

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(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Instructions in Previous Visits and Reply	Insp Det	Instruction Status
2.આપણે ત્યાં જનરેટ થતાં mill scale h/w ને copper recyclerને આપવાના છો તો તે કોને આપવાના તેની detail supporting documents જોડે submit કરાવવું; Dear Sir,@#$Reply No.2.We have identified one authorized recycler for CCR Mill scale and identification of more authorized recycler is under progress. The details about identified recycler is attached as Anexure-2@#$(submitted hard copy with reply)@#$@#$We are very much committed to abide by all the statutory rules and regulations under various environmental laws. @#$We remain available for any clarification that you may require, please do offer us an opportunity for personal hearing to put forward the explanations/clarifications provided by us.@#$For Hindalco Industries Limited@#$@#$Dr Sanjay Kumar@#$Head -Environment@#$ (31/05/2021)	605876(20/05/21)	---
1.અગાઉ તા. 18/03/2021ના આપેલ સૂચનાઓ પૈકી બાકી રહેલ સૂચનાઓની પૂરતતા કરવી; Dear Sir,This has reference to above mentioned subject; we are submitting herewith point wise reply as below: @#$To complete the remaining instructions as per the instructions given on 18/03/2021.@#$Reply No.1: The status of instructions given during 18th March 2021 visit is attached as Annexure -1(submitted hard copy)@#$Point no.1 Redevelopment of entire area is under progress as per plan.@#$Point no.2 Current Status: Completed@#$Point no.3 Required RAV (Rotary Air Lock Valve) have been procured, installation will be completed within the ongoing shutdown.@#$Point no.4 Replacement of duct line and bellows are in progress and will be completed within the ongoing shutdown.@#$Point no.5 Current Status: This will be further validated after start-up of Smelter 3.@#$Point no.6 Technical evaluation of ESP efficiency is under progress and will be completed by August 2021. Due to COVID condition vendors are reluctant to travel and visit the site.@#$Point no.7 Current Status: Technical studies and way forward is under progress@#$Point no.8 Current status: Under progress as per plan.@#$Point no.9 Current status: Completed@#$Point no.10 Current Status: Under progress as per the plan.@#$Point no.11 Current Status: Under progress and impacted by COVID@#$Point no.12 Current status: Completed@#$Point no.13 Current status: Completed@#$Point no.14 Current Status: The land development work in 16 ha area is almost 40% completed, Plantation layout has been finalized. The sapling and other materials are being procured. The plantation will be started shortly@#$@#$We are very much committed to abide by all the statutory rules and regulations under various environmental laws. @#$We remain available for any clarification that you may require, please do offer us an opportunity for personal hearing to put forward the explanations/clarifications provided by us.@#$@#$For Hindalco Industries Limited@#$@#$Dr Sanjay Kumar@#$Head -Environment@#$@#$ (31/05/2021)	605876(20/05/21)	---
Evaluate the efficiency and adequacy of all provided ESPs.; Dear Sir@#$We have started evaluation of the efficiency of all ESPs in power plant internally and invited competent vendors for conducting technical evaluation. We will complete the study by 6 months and initiate necessary improvements as required. (02/04/2021)	600553(18/03/21)	---
To furnish the details about utilization of copper slag in road construction in Dahej GMB port area and also give clarification about the same.; Dear Sir@#$We understand that during 2009-11, M/s Sterling Port Limited has procured Copper Slag from Birla Copper. On 20.03.2021 a joint visit was done by us along with GPCB officials to GMB port which is 12 km away from our plant. We further understand that discussions were held with local people and that the road was constructed by M/s Sterling Port Limited. We have observed that the said road is constructed by utilizing Copper Slag blended with Fly Ash which is in-line with the approvals and industry best practice. (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN

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(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

To lift previously dumped copper slag from Reserved Forest area and also ensure no copper slag should be dumped in Reserved Forest area.; Dear Sir@#$We would like to mention that there is no water discharge from our plant to Forest area. Our water management is through closed network of pipelines and dedicated drains with necessary treatment & recycling facilities. @#$@#$In our continued commitment to ensure not only compliance to regulatory requirements as also being conscious of taking proactive steps towards conservation of environment we are in the discussion with the forest department and shall initiate immediate steps to carry out such activity as may be permitted/required. We wish to assure that since the reinforcement of our premises as stated above no copper slag has escaped our premises inadvertently or otherwise. @#$ (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN
11) Copper slag is observed being dumped in about 10-meter width area of Reserved Forest, along the boundary wall of factory premises, behind the 16-hectare land area. leachate wastewater is observed being accumulated in Reserved forest area in the form of small wastewater pondings (@ 2meter dia with 2 feet depth), generated due to previously discharged wastewater and dumped copper slag. Whitish spot due to salt precipitation is observed in huge area of Reserved forest.; Dear Sir@#$We would like to mention that there is no water discharge from our plant to Forest area. Our water management is through closed network of pipelines and dedicated drains with necessary treatment & recycling facilities. @#$@#$In our continued commitment to ensure not only compliance to regulatory requirements as also being conscious of taking proactive steps towards conservation of environment we are in the discussion with the forest department and shall initiate immediate steps to carry out such activity as may be permitted/required. We wish to assure that since the reinforcement of our premises as stated above no copper slag has escaped our premises inadvertently or otherwise. @#$ (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN
During visit, Heavy fugitive emission is observed from various locations of duct line of Smelter plant 3 due to leakages in duct line. To rectify all leakages to avoid fugitive emissions.; Dear Sir@#$We have smelting furnaces in Smelter3 connected with sulphuric acid plant (SAP3) in the off-gas circuit with large diameter of ducts ranging from 1 to 2.4 meters. During normal operation the off gas goes to SAP for Sulphuric Acid Production.@#$The entire system including ducts from the smelter to Sulphuric Acid Plant is kept in negative pressure to ensure movement of off-gas from smelter to SAP and then to the stack via Tail Gas Scrubber. This ensures that there is no fugitive emission from the system during normal operation. @#$During the visit, the plant was under shutdown and the system was not under desired negative pressure. Due to thermal shocks during operations and consequent contraction and expansion of the ducting minor cracks occur in the bellows and expansion joints. As the system was not under negative pressure, some amount of residual gas escapes during the duration of shutdown activities. As part of the overall 57 days' shutdown, 200 metre length ducts and bellows is planned to be replaced and which we believe will address this situation from recurring. @#$During the visit, ongoing duct fabrication work was shown, and photographs of fabrication, prefabricated ducts and installation work is furnished below.(Submitted in hard copy to GPCB RO and HO)@#$ (02/04/2021)	600553(18/03/21)	---

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(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

ESPs attached to Smelter plat 3 are observed not in operation during shut down and cleaning period of smelter plant 3 furnaces. Heavy dust & SO2 gas emission is observed being emitted through process vent of common scrubber of Smelter plant 3. To operate provided apcms properly and efficiently during regular operation and start-up/shut down & cleaning operation period to avoid heavy stack emission.; Dear Sir@#$During plant running conditions, when the Smelter feed is on, the off gas from furnaces are passed through Waste Heat Recovery Boiler and ESP. After dust removal in ESP, SO2 rich gas are taken into SAP for gas cleaning, drying and catalytic conversion of SO2 to SO3, followed by absorption in water to produce Sulphuric Acid (Dupont Technology). Post recovery of SO2 from the gases, the residual gas passes through the Tail Gas Scrubber (DuPont Dyna wave technology). @#$As mentioned earlier, Smelter 3 was under shutdown for conducting major revamp activities for a period of 57 days. During the visit, the shutdown was underway with feed having been stopped at 3:50 AM on 18.03.2021. Post the stoppage of feed, the liquid metal in the furnaces must be drained out and furnace to be subsequently cooled for man entry to undertake the overhauling jobs. For draining the molten metal, the burners have to be kept on which results into generation of residual flue gases. The volume of this residual gas is low and therefore the residual gas cannot entirely heat up the off-gas circuit above dew point. Due to this, the downstream off-gas circuit equipment (ESP and ducts) remains at a lower temperature than its dew point leading to acid condensation and associated equipment corrosion. During such condition if ESP is kept ON, it will create sparks, trip frequently and lead to short-circuit in emitting electrodes.@#$The recommendation from OEM (Alstom, now GE) is to stop electrical circuit of ESP when off-gas temperature drops below 230 Deg C. The SOP from OEM is attached herewith as Annexure-01.@#$(Submitted hard copy to GPCB RO and HO)~The residual gas during shutdown cannot be taken to SAP because of lower SO2 concentration which will lead to fouling and fast deterioration of catalyst.~Also, it will lead to problem of running the Wet ESP and lead to corrosions in the system and create more operational and environmental issues. (02/04/2021)	600553(18/03/21)	---
To remove deposited sludge in ETP tanks to increase efficiency of ETP.; Dear Sir@#$In ETP 1, we have 5 Reaction Tanks with 4 in operation and 1 in maintenance. The Lime scale observed in Reaction Tank #3 during the visit is of regular size for any lime-based Reaction Tanks. We have not observed any drop in efficiency in pH Neutralization. There is cycle of 6 moths with Reactions Tanks are taken-up subsequently for cleaning. Currently Reaction Tank #1 is under maintenance and #3 will be taken-up after this. (01/04/2021)	600553(18/03/21)	---

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Continuous Seepage of acidic greenish coloured wastewater is observed in SAP 1 area. seeped wastewater is being accumulated in kachcha drain in about 15 meter * 0.5-meter area with 3 feet depth. To lift seeped wastewater to ETP and identify the source of seepage and rectify the same to prevent seepage and percolation of acidic wastewater into under ground strata.; Dear Sir@#$The observation is at sulphuric acid plant (gas processing and absorption area). The seepage noticed at the time of inspection was at the acid handling area, containment wall and floor joints. We would like to submit for your consideration that as a part of the planned maintenance, the repair activities were started couple of weeks back and is in progress. The source of acid has been identified to be on account of pipeline leakage in the contained acid handling area. The seepage was minor in nature and was accumulated in a single small puddle in that section and was pumped to ETP. During inspection itself the seepage was arrested. @#$We would submit for your consideration that the containment area is almost 30 mtr x 30 mtr. The inspection and deliberation on repair methodology demand exposing the floor and dyke joints. In order to do that, we had to break the outside area floor and expose 0.5 mtr area of floor in a section of 15 mtr at one side of the containment wall. The channel of 1 to 2 ft depth is not the drainage, rather it is the excavated area to expose the floor HDPE liner and containment wall joints. Temporary repairs have been done in two places and the one noticed during inspection was in the process of being attended to. @#$Further, we would submit for your consideration that this activity is part of the various planned upliftment and routine maintenance activities. We have already decided to completely reconstruct the entire area from bottom soil with an upgraded design and work in that direction has already started. The construction procedure involves taking out contaminated soil to stabilize and re-develop the entire area. In order to start the construction from virgin soil with a monolithic construction, HDPE liner and acid resistant tiles etc. This work is likely to be completed between three to nine months. @#$ (01/04/2021)	600553(18/03/21)	---
Green belt and plantation area should be developed in periphery of factory premises to control dust emission.; Dear Sir@#$Currently, we have about 33% of area covered under Green Belt. Further to this, as mentioned above, we plan to develop significant area of 16 Ha into green belt. The area development is under progress and plantation will start in few months. @#$We are very much committed to abide by all the statutory rules and regulations under various environmental laws. @#$We remain available for any clarification that you may require, please do offer us an opportunity for personal hearing to put forward the explanations/clarifications provided by us.@#$ (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN
Copper slag and C&D waste is observed being dumped in open land area (16 -hectare area) located north side of Smelter plant 3. To lift left over copper slag which was previously dumped from said area to dedicated storage area.; Dear Sir@#$The traces of leftover quantity are currently being cleaned up and surface compaction and dressing is under progress from the west end as observed during the visit at said location. More than 50% of the area has already been completed and remaining work is ongoing. @#$Construction and Demolition waste is kept for ongoing filling and levelling of the land and for road and other infrastructure construction will be completed by October, 2021. @#$ (02/04/2021)	600553(18/03/21)	---
Regular water sprinkling should be carried out in construction area to prevent dusting. ; Dear Sir@#$Dust observed during the visit was observed in Smelter 3 shutdown related fabrication area, the day of the visit was first day of annual shutdown of smelter 3. Mobile sprinkling system mobilization got delayed by a day but was implemented on the same day as the visit. Photograph of tanker Water Sprinkling is as below.(Submitted in hard copy to GPCB RO and HO) (02/04/2021)	600553(18/03/21)	---

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(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Actual Results of parameters like PM and SO2 are not reflected in OCEMS of stacks of Smelter plant 3. hence, frequent calibration of OCEMS provided in different Stacks should be done.; Dear Sir@#$Calibration of OCEMS is done every quarter as per the CPCB guidelines. However, we have called engineers from vendor organizations to check for any erratic results and re-calibrate the OCEMS sensors accordingly. This will be further validated after the Smelter 3 start-up. (02/04/2021)	600553(18/03/21)	---
DAP and H3PO4 plant are closed since April 2020 for carrying out modification work. submit time bound action plan for modification/upgradation of DAP and H3PO4 plants.; Dear Sir@#$@#$ DAP and H3PO4 plants have been taken for maintenance/modernization shutdown since 27th April 2020. M/s. ThysenKrupp, M/s. Prayon (Belgium), M/s. Incro (Spain) have been engaged to study the plant and recommend equipment and process upgradation to ensure sustainable plant operations. It will take another 6 months for finalizing the technical study and deciding on way forward. Further details as may be required will provided as required. (02/04/2021)	600553(18/03/21)	---
To ensure preventive and corrective actions to prevent any seepage/discharge of wastewater or dumping of any solid waste in Reserved Forest area and CRZ area.; Dear Sir@#$We have complete pipeline and drainage network for wastewater handling, treatment and recycling. We do not dispose any wastewater in open land.@#$Boundary wall on the northern side of Birla Copper was constructed a few years back. After this, there is no possibility of material crossing into forest area from Birla Copper premises. @#$ (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN
To implement coal handling guidelines properly for cola storage yard. also submit time bound action plan for the same.; Dear Sir@#$In-conformance with coal handling guidelines, we are executing following activities: @#$@#$1.Installation of Wind Screen North and west sides completed, South and East erection work in progress ,shall be completed by June 2021@#$2.Five numbers of Bag filters at Conveyor transfer towers,Three Nos – erection completed. Two Nos – erection in progress and shall be completed by : Dec 2021@#$3.Dust suppression using mobile mist canon Completed in Dec 2020@#$4. Up-gradation of Drain and Road is Ongoing shall be completed by Mar 2022@#$ (02/04/2021)	600553(18/03/21)	---
આપના દ્વારા ડિસ્પોસલ કરવામાં આવેલ waste માં અમુક અંશે criteria કરતાં વધારે moisture જણાય છે. Moisture માટે આપના દ્વારા disposed કરતાં પહેલા કોઈ test કરવામાં આવે છે કે કેમ? તે અંગે સ્પષ્ટતા કરવી અને આપના siteમાં વધારે moisture વાળો waste ન જાય તે માટે કાળજી રાખવી.; Sir, we have investigated and found that Washing nozzle of one of the ETP Sludge filter got damaged and led to increase in moisture for short duration in the first shift of 18th February 2021, ETP Team had already taken the filter for maintenance and corrective measure was ongoing. Moisture of ETP sludge is checked regularly through random sampling, we will take more proactive approach with increased frequency of sampling. (24/02/2021)	596555(18/02/21)	Partial Compliance

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Annexure Details - Air,Stack,Hazardous Waste & Samples PCB-ID: (15178)

A Sample Details

Sr	Act	Ph/Temp/Air Sampled	Time	Type	Sampling Point	Col-Cond
1	W-12	@ 7 / 29	1600-1600	REP	## final outlet of the etp ~	colorless

B Process Stacks

Sr	Stack attached to	Mts	Remark	Details of APCM	Probable Pollutants.
1	... Any Other	75	secondary gas scrubber- copper -i	SCR	
2	... Any Other	75	slag cleaning furnace, copper-i	FIL,DUS	
3	... Any Other	20	anode casting, smelter-i	N.A	
4	... Any Other	75	centrrlised scrubbing sys, copper-iii	SCR	
5	Sulphuric Acid Plant	75	sulphuric acid iii	N.A	so2,acid mist
6	... Any Other	20	cathode stripping m/c, refinery-iii	N.A	
7	... Any Other	20	scrap anode washing m/c, refinery-i	N.A	
8	... Any Other	25	liberator scrubber, refinery-i	SCR	
9	... Any Other	60	dap/npk plant	SCR	spm,so2,nox,nh3,hf
10	... Any Other	60	pap	SCR	pm,hf
11	... Any Other	45	pmr	DUS	spm , so2 , nox
12	Sulphuric Acid Plant	75	sulphuric acid plant i	N.A	so2,acid mist
13	*** Not Applicable	75	plant not exist	N.A	
14	... Any Other	20	cathode stripping m/c- refinery-i	N.A	
15	... Any Other	20	cathode stripping m/c-ii	N.A	so2
16	... Any Other	45	slag granulation, smeter-i	N.A	
17	... Any Other	58	steam dryer, smelter-i	DUS	
18	... Any Other	46	scf (bypass vent), smelter-i	DUS	
19	*** Not Applicable	0	smelter - ii not in existence	SCR	
20	*** Not Applicable	0	coal feeder	DUS	
21	... Any Other	60	granulator ,dryer,cooler,	SCR	spm,so2,nh3,f
22	... Any Other	25	liberator stack, refinery-iii	WSP	

C Flue gases Stacks

Sr	Stack attached to	Mts	Remark	SMF	APCM	Fuel	Consp-Unit	Insp Remk
1		47	P S Con.Area (emergency), Smelter-I	N.A	N.A			
2		38	SAP-III Pre Heater	N.A	HLS		1.5 T/hr	
3		0	SAP-II Pre Heater not in existence	N.A	HLS,N.A		1 MT/HR	
4	.... Any Other	30	SAP-I Pre Heater	N.A	N.A	Neptha	1 MT/HR	
5		26	Shaft Furnace of CCR Plan	N.A	N.A		0.6 MT/Hr	
6		75	CFBC Bolier	N.A	ESP		31.6 T/hr	
7	Boiler	60	Power Plant	N.A	ESP	Coal	31.6 T/hr	
8	Boiler	85	Captive Power Plant	N.A	ESP	Coal	31.6 T/hr	
9	D.G. Sets	30	D.G.Set-I	N.A	CYC	H.S.D	1.0 KL/Hr.	
10	D.G. Sets	30	D.G.Set-II	N.A	CYC	H.S.D	1.0 KL/Hr.	
11		0	Package Boiler not in existence	N.A	SCR		1.0 KL/Hr.	
12	.... Any Other	35	CCR-III	N.A	N.A	L.N. Gas		

D Details about Hazardous Waste Management :

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Sr	Source of Hazardous Waste	Catg	Qty/Year	HW Disposal Management
1	Sludge And Filter Cakes	I -8.2	175095.000-M.T	COL,STO,DST,TRA
2	Arsenic-Bearing Sludge	I -7.3	270.800-M.T	COL,STO,DST,TRA
3	Used or Spent Oil	I -5.1	50.000-M.T	COL,DSS,RRE,STO
4	Spent Electrolytic Solutions	I -8.1	52560.000-M.T	CIW,OTH,STO
5	Spent Catalyst	I -17.2	160.000-M.T	COL,CYC,STO
6	Process acidic residue, filter cake, dust	I -17.1	12.000-M.T	COL,CYC,STO
7	Spent ion exchange resin containing toxic metals	I -35.2	7.500-M.T	COL,STO,DST
8	Exhaust Air or Gas cleaning residue	I -35.1	864.000-M.T	COL,CYC,STO
9	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	I -33.1	200.000-M.T	COL,DSS,RRE,STO,TRA
10	Selenium	II -A8	6.000-M.T	COL,CYC,STO
11	Silver	II -A9	6.000-M.T	CYC,STO
12	Inorganic Acids (Spent Acids)	II -B15	66960.000-M.T	COL,DSS,CYC,STO,TRA
13	Filter Waste	Z -Z37	20.000-M.T	DST
14	Contaminated cotton rags or other cleaning materials	I -33.2	15.000-M.T	COL,DSS,DEC,DSI,STO,TRA
15	Rubber	X -X08	5.000-M.T	COL,DEC,CYC,STO,TRA
16	Glasswool	X -X02	100.000-M.T	CIW,COL,DSS,DEC,DSI,CYC,REU,STO
17	Copper reverts, cake and residue	IV -4	72000.000-M.T	COL,DEC,S&S,CYC,STO,TRA
18	Slags from copper processing for further processing or refining	IV -6	2500.000-M.T	CIW,COL,DEC,S&S,CYC,STO,TRA,DET
19	Copper reverts, cake and residue	IV -4	3000.000-M.T	COL,DEC,CYC,RRE,STO,TRA
20	Slags from copper processing for further processing or refining	IV -6	6000.000-M.T	COL,DEC,CYC,RRE,STO,TRA
21	Copper reverts, cake and residue	IV -4	35000.000-M.T	COL,DEC,CYC,STO,TRA
22	Process Residues	I -7.2	80.000-M.T	COL,DEC,OTH,CYC,STO,TRA

E Products :

Sr	Product Name	NOC Qty	CCA Qty	Applied Qty	Inspection Remark
1	AlF3	0.000	500.000 - M.T	0.000	
2	continuous cast copper rods	10000.000	40000.000 - M.T	10000.000	
3	Copper Cathode	0.000	41666.000 - M.T	0.000	
4	Copper Wire (< 4 mm)	60000.000	60000.000 - M.T	60000.000	
5	DAP/NPK Fertiliser	0.000	72666.000 - M.T	0.000	
6	Electric Power	0.000	145.600 - MWH	0.000	
7	gold	0.000	2.172 - M.T	0.000	
8	Oxygen(Tech)	0.000	65000.000 - M.T	0.000	
9	Phosphoric Acid	0.000	30000.000 - M.T	0.000	
10	Silver	0.000	16.670 - M.T	0.000	
11	Sulphuric Acid	0.000	122500.000 - M.T	0.000	

F Raw material :

Sr	Raw Material Name	Capacity - Unit / Month
1	ammonia	0.000 - M.T
2	coal	0.000 - M.T
3	copper concentrate	0.000 - M.T
4	rock phosphate	0.000 - M.T

G Water Consumption & Generation Break up

Sr	Water Code (Qty in klpd - Kilo Ltr per Day)	WC : 40710.000	WWG : 6029.000	Water Source	Remark
1	Agriculture	100.000	0.000	SIDC	
2	Boiler Feed	4828.000	184.000	SIDC	
3	Cooling Water	24874.000	0.000	SIDC	
4	Domestic Purpose	1218.000	406.000	SIDC	
5	Domestic Purpose	1118.000	894.000	SIDC	
6	Mnfg Process	8572.000	4545.000	SIDC	water is being consumed in process

H Solid Waste

Sr	Solid Waste Name	Qty-Unit	Coll Mode	Disp Mode
1	Copper Slag	65500.000 - M.T	OTH	OTH
2	Phosphogypsum	150000.000 - M.T	LIP	OTH
3	Fly Ash	5500.000 - M.T	OTH	OTH

Inspection Team : Shri B.D.Prasad,DEE - MR. RAJENDRASINH RAJABHAU GAEKWAD

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

I hereby affirm, that all the PDF, Data mentioned above, fees paid has been checked & certified.

Signature By(Shri B.D.Prasad,DEE)

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

1 **Industry Details** **Hindalco Industries Ltd**

Outward No: 29169-10/11/2021

Email :
sanjay.k@adityabirla.com

Telephone :
02641662522

PLOT NO:2,10,11,43 GIDC,
AT POST. DAHEJ-LAKHIGAM, TAL:VAGRA,
DAHEJ - 392130
DIST : Bharuch , TAL : Vagra , SIDC : Dahej

Inspection Id : 626671 (After Notice of DIR) **Ro Name : Bharuch**

2 **Type / Scale / Sector / Status :** RED / LARGE / Copper Smelter / In Operation

3 **Inspection Dt & Time :** 08/11/2021 14:00 / Air , Water , Hazd **Person Contacted :** Dr. Sanjay Kumar

4 **Env Audit Detail : Sch : 1 , Birla Vishvakarma Mahavidyalaya Engineering College, , Year : 2017 , On Dt :**

Commissioned Dt : 31/03/1997 **Production Start Dt :** 01/04/1997 **Applicability of CRZ Rules :** No

5 **Water Consumption in Kilo Lts Per Day** Ind : 38374.000 Dom : 2336.000 **Borewells:** 0

6 **Waste Water generation / Discharge (klpd) :** Ind : 4729.000 Dom : 1300.000 **Tubewells:** 0

7 **Consumer No.(Electric Meter):** **Source of Water Supply:** GIDC

8 **Disposal Mode of Industrial / Domestic :** Sea / On Land

9 **Discharge Pt / Final Receiving Body (Ultimate):** To Effluent Treatment Plant / Deep sea though multiple diffuser system

10 **Status of water consent Under the Water Act,1974:** AWH-115084-02/03/2026 Last Inward:206146-28/10/2021[ONL]

11 **Effluent Treatement plant (ETP) : Units, if provided and status :**
ETP Details : P-Chemical Dousing Tank,P-Clarifier,P-Collection Cum Equalization,P-Collection Tank,P-Lamella Settler,P-Nuetralization,P-Pri Settling Tank,S-Anaerobic Digestor,S-Filter Pressure,Secondary,Tertiary

12 **Whether Industry is a member of CETP ?** No

13 **Boilers=2 , DG Sets=2 , Flue Gas =6, Process =22 , ETP Cap = 7380 , Capacity of All = 500000 MT Copper Cathode**

APCM Details : Bag Filter,Cyclone ,Dust Collector,E.S.P,Heater/Furnace-Low Sulphur Fuel,Not Applicable,Scrubber,Water Sprinkler

Fuel Used : Coal,H.S.D,L.N. Gas,Neptha

Stack Attached to : *** Not Applicable,.... Any Other,Boiler,D.G. Sets

14 **TSDF Name :** Using OWN TSDF Facility

15 **Lab Charges Pending : Rs. 33940.00** **Water Cess Charges Pending : NIL**

16 **Last Env. Form V : 2015-2016** **Water Cess Return : 2017-2018** **HW Monthly Return : 2021-99**

17 **Last 3 Legal Action :**

Insp Dt	Act	Leg Dt	For	Insp ID	IR-Leg	Type	Out No
18/03/2021	NOT	04/09/2021	EPA,,	600553	NOT	APP	599734
18/02/2021	SCN	20/03/2021		596555	SCN	HOR	586273
24/06/2020	SCN	05/10/2020		569038	SCN	ROU	569163

Monthly Patrak Data : Last Return : 202110 **HAZD Waste Disposal : 97.120 (0 Trucks)**

Electricity Units Consumed in month	Water Consumed in month	Effluent Discharged in month
Production - 55312610, ETP - 332696, APCM - 8186055	Meter Reading - 4329891, Kilo Litre - 576372	Meter Reading - 45593, Kilo Litre - 14825

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(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

One Time Updations				
k	-	**Recycler Registration Valid ??**	N.A	
General Observation				
a	-	Is the Industry in Operation ??	Yes	
a	-	R.O File No	ID 15178	
b	-	**Industry Operating without CCA**	No.	
c	-	**Has Production exceeded (last 3 MTHs) than CCA-Qty**	No.	
d	-	**Any products-NOT in CCA, manufactured-Last 3 MTHs**	No.	
e	-	**Foul Odour/Fugitive Emission/Bye Pass in Premises ??**	No.	
f	-	Industry Name CHANGED in recent times ??	No.	
g	-	**Has Regn with CETP or TSDF expired ??**	N.A	
h	-	Seperate Energy Meter for A.P.C.M ?	N.A	
h	-	Provision of any STAND-BY Pump ??	N.A	
Air Related				
a	-	**Fuel Type confirmitive with CCA ?**	Yes	
b	-	**Av. Fuel Consumption EXCEEDING CCA limits**	No.	
c	-	**APC Measures confirmitive with CCA conditions ??**	Yes	
d	-	ALL APCMs are in operation	Yes	
e	-	SMF availability	Not Reqd	
f	-	**Thick Smoke observed in Flue Gas/Processes ??**	Yes	Intermittednt Unevenemission is observed
g	-	**ph of Scrubbing Media as per requirement ??**	Yes	
h	-	Ultimate Disposal of Scrubbing Media	ETP	
i	-	Nos of Samples : Stack & Ambient	4, 1	
GEM				
18	-	Where Authorization Under BMW Rules 2016 obtained ? Provide Authorization No. / Date	Yes	NA
Haz Waste Related				
a	-	**Haz waste Catg confirmitive with CCA**	Yes	
b	-	**H.W generation exceeding CCA limits**	No.	
c	-	**Collection, Storage, Treatmnt, Disposal Facility Adequate ??**	Yes	
d	-	Reusing or Recycling of Haz Waste by Industry ?	No	
e	-	LogBook / XGN Manifests / Disposal Records TALLYING ??	Fully	
f	-	Stock of Haz-Waste @ premises/Whether EXCESS ?	---	
g	-	**Recycler/ Actual user has valid Authorization under rules 6 or 9 of HOWR-2016?**	Yes	NA
h	-	**Installed capacity of the plane based on machinery installed (Capacity of Machine,No. of Batch/Day,Annual Capacity)**	--	
i	-	**Technical capability and equipment complying with the SOP/Guideline?**	Yes	
j	-	**Is unit complying the conditions gives in SOP/Guidelines?**	Yes	
k	-	**Facility is adequate for the applied process**	Yes	
l	-	**Passbook is maintained?**	Yes	
m	-	**Details of PLI, if applicable**	---	
n	-	**Details of safety spects provieded by the facility**	---	
o	-	**Seprate storage area for Haz. Waste for the utilization or generation from the process is provided?**	Yes	
p	-	**Quantity of Hazardous waste procured as per CCA?**	Yes	
Water Parameter				
b	-	Source of Water Supply	GIDC	
c	-	**W.W.G is EXCEEDING the CCA Limits**	No.	

Gujarat Pollution Control Board

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(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

d	-	**W.W Disposal as per the Consent Conditions ?**	Yes	
e	-	Was the ETP in operation ?	Yes	
f	-	Treatment System ADEQUATE to handle existing effluent	Adequate	
g	-	**Did u observe ANY ILLEGAL Discharge ??**	No.	
h	-	Nos of Samples collected	2	

Remarks :

-

Note: EIA 2006 / SEIAA / E.C / MOEF Applicable : Yes

Site Observations during Inspection , PCB-ID: (15178)

This unit is inspected with ref to Notice of Direction issued dated 04/09/2021. The IR crux is attached herewith. [4756]-10/11/2021

~ RO Comments/Reply :strict action may be initiated as looking to the non compliance of some conditions stipulated in previous NOD and on the basis of AR of collected samples-10/11/2021

I recommend :

W.C Notings: ----------[4756-AEE]~

Specific Instructions given to Industry at the time of visit , for Pt to Pt Compliance

4. Submit the details about generation and disposal of Arsenic bearing waste.

5. Develop Green belt and plantation in the periphery of factory premises.

1. Intermittent uneven emission is observed from the Smelter-1 stack. One sample is collected from the same. Submit clarification in this regard and take necessary action for the same.

3. Contaminated water/water ponding is observed in the reserved forest area along the boundary wall of the premises. one sample of the same is collected to check the contamination level.

2. Copper slag is still observed lying dumped in about 10meter width area of reserved forest along the boundary of factory premises.

Compliance Observed in this Inspections.

Gujarat Pollution Control Board

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(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Instructions in Previous Visits and Reply	Insp Det	Instruction Status
It is observed that point No.2,7,8,10,14 of written instructions issued on 18/03/2021 are partially complied and point no. 11 & 12 are still pending/Not complied. In this regards you are instructed to take all necessary actions in compliance with above mentioned pending works at the earliest.; Dear Sir@#$Please find below current status of point No.2,7,8,10,11,12,14 of written instructions issued on 18/03/2021 @#$ @#$Point No.2 :Current Status: We are currently following a six-monthly cleaning cycle, The reaction tank no.1,4 and 5 are cleaned and in good condition, no.2 and 3 will be taken for cleaning@#$as planned. We will revisit the current cleaning cycle of frequency based on process requirement.@#$Point No.7 :Current Status: H3PO4 and DAP plants are still closed and not in operation. Finalization of way forward is in progress.@#$Point No.8:Current status:Installation of Wind Screen Overall, 909(o work completed .4 numbers of Bag filters at Conveyor transfer towers completed.Dust suppression using mobile mist canon done.@#$Point No.11: Current Status :We have approached to Forest department on this subject and will update progress from time to time.@#$Point No: 12: Current Status :Since 2011, we have constructed facilities such as boundary wall, proper drainage and pipeline network. This robust system ensures there is no seepage/discharge@#$of wastewater or any waste dumping in surrounding reserve forest area, CRZ area or any other areas adjoining factory boundary.@#$Point No.14:Current Status:We are continuously involved in developing & expanding green belt in out premises. Our total plant area is 342 Ha and out of that our greenbelt cover is 117 Ha.We have dedicated team for Horticulture and green belt development in plant premises.The plantation done during last financial year is 1676 Nos and during current financial year till July-21 is 573 Nos. We have also started doing plantation in Northern periphery and the same will be completed within 5th June, 2022.@#$@#$Thanking You@#$Dr. Sanjay Kumar@#$Head - Environment@#$@#$ (19/08/2021)	615284(05/08/21)	Partial Compliance
2.આપણે ત્યાં જનરેટ થતાં mill scale h/w ને copper recyclerને આપવાના છો તો તે કોને આપવાના તેની detail supporting documents જોડે submit કરાવવું; Dear Sir,@#$Reply No.2.We have identified one authorized recycler for CCR Mill scale and identification of more authorized recycler is under progress. The details about identified recycler is attached as Anexure-2@#$(submitted hard copy with reply)@#$@#$We are very much committed to abide by all the statutory rules and regulations under various environmental laws. @#$We remain available for any clarification that you may require, please do offer us an opportunity for personal hearing to put forward the explanations/clarifications provided by us.@#$For Hindalco Industries Limited@#$@#$Dr Sanjay Kumar@#$Head -Environment@#$ (31/05/2021)	605876(20/05/21)	Fully Complied

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

1.અગાઉ તા. 18/03/2021ના આપેલ સૂચનાઓ પૈકી બાકી રહેલ સૂચનાઓની પૂરતતા કરવી; Dear Sir,This has reference to above mentioned subject; we are submitting herewith point wise reply as below: @#$To complete the remaining instructions as per the instructions given on 18/03/2021.@#$Reply No.1: The status of instructions given during 18th March 2021 visit is attached as Annexure -1(submitted hard copy)@#$Point no.1 Redevelopment of entire area is under progress as per plan.@#$Point no.2 Current Status: Completed@#$Point no.3 Required RAV (Rotary Air Lock Valve) have been procured, installation will be completed within the ongoing shutdown.@#$Point no.4 Replacement of duct line and bellows are in progress and will be completed within the ongoing shutdown.@#$Point no.5 Current Status: This will be further validated after start-up of Smelter 3.@#$Point no.6 Technical evaluation of ESP efficiency is under progress and will be completed by August 2021. Due to COVID condition vendors are reluctant to travel and visit the site.@#$Point no.7 Current Status: Technical studies and way forward is under progress@#$Point no.8 Current status: Under progress as per plan.@#$Point no.9 Current status: Completed@#$Point no.10 Current Status: Under progress as per the plan.@#$Point no.11 Current Status: Under progress and impacted by COVID@#$Point no.12 Current status: Completed@#$Point no.13 Current status: Completed@#$Point no.14 Current Status: The land development work in 16 ha area is almost 40% completed, Plantation layout has been finalized. The sapling and other materials are being procured. The plantation will be started shortly@#$@#$We are very much committed to abide by all the statutory rules and regulations under various environmental laws. @#$We remain available for any clarification that you may require, please do offer us an opportunity for personal hearing to put forward the explanations/clarifications provided by us.@#$@#$For Hindalco Industries Limited@#$@#$Dr Sanjay Kumar@#$Head -Environment@#$@#$ (31/05/2021)	605876(20/05/21)	Partial Compliance
Evaluate the efficiency and adequacy of all provided ESPs.; Dear Sir@#$We have started evaluation of the efficiency of all ESPs in power plant internally and invited competent vendors for conducting technical evaluation. We will complete the study by 6 months and initiate necessary improvements as required. (02/04/2021)	600553(18/03/21)	Fully Complied
To furnish the details about utilization of copper slag in road construction in Dahej GMB port area and also give clarification about the same.; Dear Sir@#$We understand that during 2009-11, M/s Sterling Port Limited has procured Copper Slag from Birla Copper. On 20.03.2021 a joint visit was done by us along with GPCB officials to GMB port which is 12 km away from our plant. We further understand that discussions were held with local people and that the road was constructed by M/s Sterling Port Limited. We have observed that the said road is constructed by utilizing Copper Slag blended with Fly Ash which is in-line with the approvals and industry best practice. (02/04/2021)	600553(18/03/21)	Fully Complied
To lift previously dumped copper slag from Reserved Forest area and also ensure no copper slag should be dumped in Reserved Forest area.; Dear Sir@#$We would like to mention that there is no water discharge from our plant to Forest area. Our water management is through closed network of pipelines and dedicated drains with necessary treatment & recycling facilities. @#$@#$In our continued commitment to ensure not only compliance to regulatory requirements as also being conscious of taking proactive steps towards conservation of environment we are in the discussion with the forest department and shall initiate immediate steps to carry out such activity as may be permitted/required. We wish to assure that since the reinforcement of our premises as stated above no copper slag has escaped our premises inadvertently or otherwise. @#$ (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

11) Copper slag is observed being dumped in about 10-meter width area of Reserved Forest, along the boundary wall of factory premises, behind the 16-hectare land area. leachate wastewater is observed being accumulated in Reserved forest area in the form of small wastewater pondings (@ 2meter dia with 2 feet depth), generated due to previously discharged wastewater and dumped copper slag. Whitish spot due to salt precipitation is observed in huge area of Reserved forest.; Dear Sir@#$We would like to mention that there is no water discharge from our plant to Forest area. Our water management is through closed network of pipelines and dedicated drains with necessary treatment & recycling facilities. @#$@#$In our continued commitment to ensure not only compliance to regulatory requirements as also being conscious of taking proactive steps towards conservation of environment we are in the discussion with the forest department and shall initiate immediate steps to carry out such activity as may be permitted/required. We wish to assure that since the reinforcement of our premises as stated above no copper slag has escaped our premises inadvertently or otherwise. @#$ (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN
During visit, Heavy fugitive emission is observed from various locations of duct line of Smelter plant 3 due to leakages in duct line. To rectify all leakages to avoid fugitive emissions.; Dear Sir@#$We have smelting furnaces in Smelter3 connected with sulphuric acid plant (SAP3) in the off-gas circuit with large diameter of ducts ranging from 1 to 2.4 meters. During normal operation the off gas goes to SAP for Sulphuric Acid Production.@#$The entire system including ducts from the smelter to Sulphuric Acid Plant is kept in negative pressure to ensure movement of off-gas from smelter to SAP and then to the stack via Tail Gas Scrubber. This ensures that there is no fugitive emission from the system during normal operation. @#$During the visit, the plant was under shutdown and the system was not under desired negative pressure. Due to thermal shocks during operations and consequent contraction and expansion of the ducting minor cracks occur in the bellows and expansion joints. As the system was not under negative pressure, some amount of residual gas escapes during the duration of shutdown activities. As part of the overall 57 days' shutdown, 200 metre length ducts and bellows is planned to be replaced and which we believe will address this situation from recurring. @#$During the visit, ongoing duct fabrication work was shown, and photographs of fabrication, prefabricated ducts and installation work is furnished below.(Submitted in hard copy to GPCB RO and HO)@#$ (02/04/2021)	600553(18/03/21)	Fully Complied

Gujarat Pollution Control Board

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(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

ESPs attached to Smelter plat 3 are observed not in operation during shut down and cleaning period of smelter plant 3 furnaces. Heavy dust & SO2 gas emission is observed being emitted through process vent of common scrubber of Smelter plant 3. To operate provided apcms properly and efficiently during regular operation and start-up/shut down & cleaning operation period to avoid heavy stack emission.; Dear Sir@#$During plant running conditions, when the Smelter feed is on, the off gas from furnaces are passed through Waste Heat Recovery Boiler and ESP. After dust removal in ESP, SO2 rich gas are taken into SAP for gas cleaning, drying and catalytic conversion of SO2 to SO3, followed by absorption in water to produce Sulphuric Acid (Dupont Technology). Post recovery of SO2 from the gases, the residual gas passes through the Tail Gas Scrubber (DuPont Dyna wave technology). @#$As mentioned earlier, Smelter 3 was under shutdown for conducting major revamp activities for a period of 57 days. During the visit, the shutdown was underway with feed having been stopped at 3:50 AM on 18.03.2021. Post the stoppage of feed, the liquid metal in the furnaces must be drained out and furnace to be subsequently cooled for man entry to undertake the overhauling jobs. For draining the molten metal, the burners have to be kept on which results into generation of residual flue gases. The volume of this residual gas is low and therefore the residual gas cannot entirely heat up the off-gas circuit above dew point. Due to this, the downstream off-gas circuit equipment (ESP and ducts) remains at a lower temperature than its dew point leading to acid condensation and associated equipment corrosion. During such condition if ESP is kept ON, it will create sparks, trip frequently and lead to short-circuit in emitting electrodes.@#$The recommendation from OEM (Alstom, now GE) is to stop electrical circuit of ESP when off-gas temperature drops below 230 Deg C. The SOP from OEM is attached herewith as Annexure-01.@#$(Submitted hard copy to GPCB RO and HO)~The residual gas during shutdown cannot be taken to SAP because of lower SO2 concentration which will lead to fouling and fast deterioration of catalyst.~Also, it will lead to problem of running the Wet ESP and lead to corrosions in the system and create more operational and environmental issues. (02/04/2021)	600553(18/03/21)	Fully Complied
To remove deposited sludge in ETP tanks to increase efficiency of ETP.; Dear Sir@#$In ETP 1, we have 5 Reaction Tanks with 4 in operation and 1 in maintenance. The Lime scale observed in Reaction Tank #3 during the visit is of regular size for any lime-based Reaction Tanks. We have not observed any drop in efficiency in pH Neutralization. There is cycle of 6 moths with Reactions Tanks are taken-up subsequently for cleaning. Currently Reaction Tank #1 is under maintenance and #3 will be taken-up after this. (01/04/2021)	600553(18/03/21)	Fully Complied

Gujarat Pollution Control Board

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(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Continuous Seepage of acidic greenish coloured wastewater is observed in SAP 1 area. seeped wastewater is being accumulated in kachcha drain in about 15 meter * 0.5-meter area with 3 feet depth. To lift seeped wastewater to ETP and identify the source of seepage and rectify the same to prevent seepage and percolation of acidic wastewater into under ground strata.; Dear Sir@#$The observation is at sulphuric acid plant (gas processing and absorption area). The seepage noticed at the time of inspection was at the acid handling area, containment wall and floor joints. We would like to submit for your consideration that as a part of the planned maintenance, the repair activities were started couple of weeks back and is in progress. The source of acid has been identified to be on account of pipeline leakage in the contained acid handling area. The seepage was minor in nature and was accumulated in a single small puddle in that section and was pumped to ETP. During inspection itself the seepage was arrested. @#$We would submit for your consideration that the containment area is almost 30 mtr x 30 mtr. The inspection and deliberation on repair methodology demand exposing the floor and dyke joints. In order to do that, we had to break the outside area floor and expose 0.5 mtr area of floor in a section of 15 mtr at one side of the containment wall. The channel of 1 to 2 ft depth is not the drainage, rather it is the excavated area to expose the floor HDPE liner and containment wall joints. Temporary repairs have been done in two places and the one noticed during inspection was in the process of being attended to. @#$Further, we would submit for your consideration that this activity is part of the various planned upliftment and routine maintenance activities. We have already decided to completely reconstruct the entire area from bottom soil with an upgraded design and work in that direction has already started. The construction procedure involves taking out contaminated soil to stabilize and re-develop the entire area. In order to start the construction from virgin soil with a monolithic construction, HDPE liner and acid resistant tiles etc. This work is likely to be completed between three to nine months. @#$ (01/04/2021)	600553(18/03/21)	Fully Complied
Green belt and plantation area should be developed in periphery of factory premises to control dust emission.; Dear Sir@#$Currently, we have about 33% of area covered under Green Belt. Further to this, as mentioned above, we plan to develop significant area of 16 Ha into green belt. The area development is under progress and plantation will start in few months. @#$We are very much committed to abide by all the statutory rules and regulations under various environmental laws. @#$We remain available for any clarification that you may require, please do offer us an opportunity for personal hearing to put forward the explanations/clarifications provided by us.@#$ (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN
Copper slag and C&D waste is observed being dumped in open land area (16 -hectare area) located north side of Smelter plant 3. To lift left over copper slag which was previously dumped from said area to dedicated storage area.; Dear Sir@#$The traces of leftover quantity are currently being cleaned up and surface compaction and dressing is under progress from the west end as observed during the visit at said location. More than 50% of the area has already been completed and remaining work is ongoing. @#$Construction and Demolition waste is kept for ongoing filling and levelling of the land and for road and other infrastructure construction will be completed by October, 2021. @#$ (02/04/2021)	600553(18/03/21)	Partial Compliance
Regular water sprinkling should be carried out in construction area to prevent dusting. ; Dear Sir@#$Dust observed during the visit was observed in Smelter 3 shutdown related fabrication area, the day of the visit was first day of annual shutdown of smelter 3. Mobile sprinkling system mobilization got delayed by a day but was implemented on the same day as the visit. Photograph of tanker Water Sprinkling is as below.(Submitted in hard copy to GPCB RO and HO) (02/04/2021)	600553(18/03/21)	Fully Complied

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Actual Results of parameters like PM and SO2 are not reflected in OCEMS of stacks of Smelter plant 3. hence, frequent calibration of OCEMS provided in different Stacks should be done.; Dear Sir@#$Calibration of OCEMS is done every quarter as per the CPCB guidelines. However, we have called engineers from vendor organizations to check for any erratic results and re-calibrate the OCEMS sensors accordingly. This will be further validated after the Smelter 3 start-up. (02/04/2021)	600553(18/03/21)	Fully Complied
DAP and H3PO4 plant are closed since April 2020 for carrying out modification work. submit time bound action plan for modification/upgradation of DAP and H3PO4 plants.; Dear Sir@#$@#$ DAP and H3PO4 plants have been taken for maintenance/modernization shutdown since 27th April 2020. M/s. ThysenKrupp, M/s. Prayon (Belgium), M/s. Incro (Spain) have been engaged to study the plant and recommend equipment and process upgradation to ensure sustainable plant operations. It will take another 6 months for finalizing the technical study and deciding on way forward. Further details as may be required will provided as required. (02/04/2021)	600553(18/03/21)	Partial Compliance
To ensure preventive and corrective actions to prevent any seepage/discharge of wastewater or dumping of any solid waste in Reserved Forest area and CRZ area.; Dear Sir@#$We have complete pipeline and drainage network for wastewater handling, treatment and recycling. We do not dispose any wastewater in open land.@#$Boundary wall on the northern side of Birla Copper was constructed a few years back. After this, there is no possibility of material crossing into forest area from Birla Copper premises. @#$ (02/04/2021)	600553(18/03/21)	Pending !! Reminded AGAIN
To implement coal handling guidelines properly for cola storage yard. also submit time bound action plan for the same.; Dear Sir@#$In-conformance with coal handling guidelines, we are executing following activities: @#$@# $1.Installation of Wind Screen North and west sides completed, South and East erection work in progress ,shall be completed by June 2021@#$2.Five numbers of Bag filters at Conveyor transfer towers,Three Nos – erection completed. Two Nos – erection in progress and shall be completed by : Dec 2021@#$3.Dust suppression using mobile mist canon Completed in Dec 2020@#$4. Up-gradation of Drain and Road is Ongoing shall be completed by Mar 2022@#$ (02/04/2021)	600553(18/03/21)	Fully Complied

Gujarat Pollution Control Board

PCB Id: 15178

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Annexure Details - Air,Stack,Hazardous Waste & Samples PCB-ID: (15178)

A Sample Details

Sr	Act	Ph/Temp/Air Sampled	Time	Type	Sampling Point	Col-Cond
1	W-13	7-8 on ph strip / 32	1530-1530	REP	## final outlet of the etp ~ --	Light yellowish,
2	W-13	@6.0 on ph strip / 31	1550-1550	REP	from contaminated water/ water ponding in the reserved forest area, ~	Greenish
3	A-5	213.84 ltr gas passed for rspm, (1) 106.92 ltr for sox & nox (4 hrs) & (2)106.92 ltr for sox&nox (4hrs / 30	1430-2230	REP	aaqm carried out at 16 acre area (behind the smelter-3, common stack) ~	Filter paper No. 3/9983
4	A-2	382.2 ltr gas passed (ntp) for pm & 58.8 ltr (ntp) for so2, / 63	1630-1700	REP	stack attached to centralized scrubbing system of smelter -iii, ~	21/3490
5	A-1	2 lpm x 10 min=20 ltr x 0.98 = 19.6 ltr (ntp) gas passed for so2 / 32	1730-1740	REP	stack attached to secondary gas scrubber of smelter -1, plant. ~	---
6	A-2	19.6 ltr (ntp) gas passed for so2 & acid mist gases / 32	1740-1750	REP	stack attached to sulphuric acid plant -1. ~	---
7	A-3	499.8 ltr.(ntp) gas passed for pm, 58.8 ltr (ntp) gas passed for so2 & 1212.71 ml for nox / 125	1825-1855	REP	stack attached to cpp-iii, cfbc boiler 60 mw. ~	Thiimble no.:- 22/3490

B Process Stacks

Sr	Stack attached to	Mts	Remark	Details of APCM	Probable Pollutants.
1	... Any Other	75	secondary gas scrubber- copper -i	SCR	
2	... Any Other	75	slag cleaning furnace, copper-i	FIL,DUS	
3	... Any Other	20	anode casting, smelter-i	N.A	
4	... Any Other	75	centrrlised scrubbing sys, copper-iii	SCR	
5	Sulphuric Acid Plant	75	sulphuric acid iii	N.A	so2,acid mist
6	... Any Other	20	cathode stripping m/c, refinery-iii	N.A	
7	... Any Other	20	scrap anode washing m/c, refinery-i	N.A	
8	... Any Other	25	liberator scrubber, refinery-i	SCR	
9	... Any Other	60	dap/npk plant	SCR	spm,so2,nox,nh3,hf
10	... Any Other	60	pap	SCR	pm,hf
11	... Any Other	45	pmr	DUS	spm , so2 , nox
12	Sulphuric Acid Plant	75	sulphuric acid plant i	N.A	so2,acid mist
13	*** Not Applicable	75	plant not exist	N.A	
14	... Any Other	20	cathode stripping m/c- refinery-i	N.A	
15	... Any Other	20	cathode stripping m/c-ii	N.A	so2
16	... Any Other	45	slag granulation, smeter-i	N.A	
17	... Any Other	58	steam dryer, smelter-i	DUS	
18	... Any Other	46	scf (bypass vent), smelter-i	DUS	
19	*** Not Applicable	0	smelter - ii not in existence	SCR	
20	*** Not Applicable	0	coal feeder	DUS	
21	... Any Other	60	granulator ,dryer,cooler,	SCR	spm,so2,nh3,f
22	... Any Other	25	liberator stack, refinery-iii	WSP	

C Flue gases Stacks

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(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Sr	Stack attached to	Mts	Remark	SMF	APCM	Fuel	Consp-Unit	Insp Remk
1		47	P S Con.Area (emergency), Smelter-I	N.A	N.A			
2		38	SAP-III Pre Heater	N.A	HLS		1.5 T/hr	
3		0	SAP-II Pre Heater not in existence	N.A	HLS,N.A		1 MT/HR	
4	.... Any Other	30	SAP-I Pre Heater	N.A	N.A	Neptha	1 MT/HR	
5		26	Shaft Furnace of CCR Plan	N.A	N.A		0.6 MT/Hr	
6		75	CFBC Bolier	N.A	ESP		31.6 T/hr	
7	Boiler	60	Power Plant	N.A	ESP	Coal	31.6 T/hr	
8	Boiler	85	Captive Power Plant	N.A	ESP	Coal	31.6 T/hr	
9	D.G. Sets	30	D.G.Set-I	N.A	CYC	H.S.D	1.0 KL/Hr.	
10	D.G. Sets	30	D.G.Set-II	N.A	CYC	H.S.D	1.0 KL/Hr.	
11		0	Package Boiler not in existence	N.A	SCR		1.0 KL/Hr.	
12	.... Any Other	35	CCR-III	N.A	N.A	L.N. Gas		

D Details about Hazardous Waste Management :

Sr	Source of Hazardous Waste	Catg	Qty/Year	HW Disposal Management
1	Sludge And Filter Cakes	I -8.2	175095.000-M.T	COL,STO,DST,TRA
2	Arsenic-Bearing Sludge	I -7.3	270.800-M.T	COL,STO,DST,TRA
3	Used or Spent Oil	I -5.1	50.000-M.T	COL,DSS,RRE,STO
4	Spent Electrolytic Solutions	I -8.1	52560.000-M.T	CIW,OTH,STO
5	Spent Catalyst	I -17.2	160.000-M.T	COL,CYC,STO
6	Process acidic residue, filter cake, dust	I -17.1	12.000-M.T	COL,CYC,STO
7	Spent ion exchange resin containing toxic metals	I -35.2	7.500-M.T	COL,STO,DST
8	Exhaust Air or Gas cleaning residue	I -35.1	864.000-M.T	COL,CYC,STO
9	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	I -33.1	200.000-M.T	COL,DSS,RRE,STO,TRA
10	Selenium	II -A8	6.000-M.T	COL,CYC,STO
11	Silver	II -A9	6.000-M.T	CYC,STO
12	Inorganic Acids (Spent Acids)	II -B15	66960.000-M.T	COL,DSS,CYC,STO,TRA
13	Filter Waste	Z -Z37	20.000-M.T	DST
14	Contaminated cotton rags or other cleaning materials	I -33.2	15.000-M.T	COL,DSS,DEC,DSI,STO,TRA
15	Rubber	X -X08	5.000-M.T	COL,DEC,CYC,STO,TRA
16	Glasswool	X -X02	100.000-M.T	CIW,COL,DSS,DEC,DSI,CYC,REU,STO
17	Copper reverts, cake and residue	IV -4	72000.000-M.T	COL,DEC,S&S,CYC,STO,TRA
18	Slags from copper processing for further processing or refining	IV -6	2500.000-M.T	CIW,COL,DEC,S&S,CYC,STO,TRA,DET
19	Copper reverts, cake and residue	IV -4	3000.000-M.T	COL,DEC,CYC,RRE,STO,TRA
20	Slags from copper processing for further processing or refining	IV -6	6000.000-M.T	COL,DEC,CYC,RRE,STO,TRA
21	Copper reverts, cake and residue	IV -4	35000.000-M.T	COL,DEC,CYC,STO,TRA
22	Process Residues	I -7.2	80.000-M.T	COL,DEC,OTH,CYC,STO,TRA

E Products :

Sr	Product Name	NOC Qty	CCA Qty	Applied Qty	Inspection Remark
1	AlF3	0.000	500.000 - M.T	0.000	
2	continuous cast copper rods	10000.000	50000.000 - M.T	10000.000	
3	Copper Cathode	0.000	41666.000 - M.T	0.000	
4	Copper Wire (< 4 mm)	60000.000	120000.000 - M.T	60000.000	
5	DAP/NPK Fertiliser	0.000	72666.000 - M.T	0.000	
6	Electric Power	0.000	145.600 - MWH	0.000	
7	gold	0.000	2.172 - M.T	0.000	
8	Oxygen(Tech)	0.000	65000.000 - M.T	0.000	
9	Phosphoric Acid	0.000	30000.000 - M.T	0.000	
10	Silver	0.000	16.670 - M.T	0.000	
11	Sulphuric Acid	0.000	122500.000 - M.T	0.000	

F Raw material :

Sr	Raw Material Name	Capacity - Unit / Month
1	ammonia	0.000 - M.T
2	coal	0.000 - M.T
3	copper concentrate	0.000 - M.T
4	rock phosphate	0.000 - M.T

Water Consumption & Generation Break up

Gujarat Pollution Control Board

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G

Sr	Water Code (Qty in klpd - Kilo Ltr per Day)	WC : 40710.000	WWG : 6029.000	Water Source	Remark
1	Agriculture	100.000	0.000	SIDC	
2	Boiler Feed	4828.000	184.000	SIDC	
3	Cooling Water	24874.000	0.000	SIDC	
4	Domestic Purpose	1218.000	406.000	SIDC	
5	Domestic Purpose	1118.000	894.000	SIDC	
6	Mnfg Process	8572.000	4545.000	SIDC	water is being consumed in process

H Solid Waste

Sr	Solid Waste Name	Qty-Unit	Coll Mode	Disp Mode
1	Copper Slag	65500.000 - M.T	OTH	OTH
2	Phosphogypsum	150000.000 - M.T	LIP	OTH
3	Fly Ash	5500.000 - M.T	OTH	OTH

Inspection Team : Shri B.D.Prasad,DEE - Shri Niraj Patel , DEE - MR. RAJENDRASINH RAJABHAU GAEKWAD - R P BUHA, SSA

I hereby affirm, that all the PDF, Data mentioned above, fees paid has been checked & certified.

Signature By(Shri B.D.Prasad,DEE)